

The position of the buds on the stems, the relative sizes, the scales, the scale rings of previous years, the leaf scars, etc., are made out by the pupils, my own remarks during this work being only suggestive as to mode of proceeding and including, where perfectly clear openings occur, such facts of physiology as their own experience can confirm. Then comes the examination of the bud structure. To study this I make use of the large terminal buds of the lilac. One of these is drawn entire. Then the scales are removed with appropriate instruments, some preferring needles, others forceps. The scales are laid out in four rows and numbered. (Flower buds are discarded for the present.) These rows of scales and evident inner leaves illustrate readily the relative position of these parts and the imperceptible transition from one to the other. What are the inner ones? Plainly leaves. When do they cease to be leaves? There is no boundary line, they must all be leaves. What is left of the bud? Only a little greenish pyramid. What is it? It must be a little short stem. What is seen on it with the lens? The places from which the leaves were taken—the leaf scars. On the old stem what name is given to the part bearing the scars or leaves? The joints, say some. Then what shall we call the part of the stem between such places? That's the joint, say others. We will call the former of these parts, nodes, and the latter internodes. This decision is approved because the terms are easy and the possible confusion is seen to be overcome.

Now, to each pupil is given a branch of a soft-stemmed fresh *Eupatorium*, taken from the green-house (*Coleus* is easily obtained and will answer the purpose.) The opposite decussate leaves are noted. With a sharp knife the internodes are cut away and the nodes, each with its pair of leaves attached, are laid on the table. The bud is now to be rebuilt. One of the dissecting needles, or very often a hat pin, is used, and the nodes with their attached leaves are spitted on to this. The leaves are then folded up carefully, beginning of course with the inner or uppermost pair; a light thread tied about them and the bud is reconstructed. Comparisons follow with pleasant and often very interesting comments, and a general feeling of good understanding prevails, which I believe even the myopic and mischievous correspondent to a late number of *St. Nicholas* might acknowledge to be of some worth. B. W. BARTON.

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Pressing plants.

The old-fashioned press has always seemed to me too slow in action and too bulky to give the best results or to be convenient. The "Acme" is nearer the true press for botanical work, but before I ever saw it I had made one upon the same plan, and have had most excellent results. My presses are made of slabs of hard wood ($\frac{1}{2}$ in. thick by 1 in. wide) tacked together so as to leave spaces a little over an inch square. Instead of straps I use four iron clamps with $2\frac{1}{2}$ in. openings. I can press as many as 150 specimens of medium size in one of these presses, and under favorable conditions of wind and sun have the greater number of them dry and ready to take out in twenty-four hours, with the colors remarkably well preserved. I find the drying greatly hastened by the use of a piece of black cardboard or paper for the outside sheet. I always set my presses out in the hottest sunshine I can find, and turn them up so that the sun's rays will strike them at right angles. I have also found it better to multiply presses than to overcrowd one press. CHARLES A. DAVIS.

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